DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A00009CH
Revision 5
Cirrus Design Corporation
SR20
SR22
October 24, 2002

TYPE CERTIFICATE DATA SHEET NO. A00009CH

This data sheet, which is part of Type Certificate No. A00009CH, prescribes conditions and limitations under which the product for the which type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Cirrus Design Corporation
4515 Taylor Circle
Duluth, MN 55811

I - Model SR20, (Normal Category), Approved October 23, 1998

Engine	Teledyne Continental IO-360-ES, Type Certificate Data Sheet (TCDS) E1CE	
Fuel	100/100LL minimum grade aviation gasoline	
Engine Limits	Maximum Take-off	2700 RPM (200 hp)
	Maximum Continuous Power	2700 RPM (200 hp)

Propeller and Propeller limits

1. Hartzell Propeller Inc. P/N BHC-J2YF-1BF/F7694
TCDS P37EA
Maximum Diameter: 76 inches
Minimum Diameter: 73 inches
Number of Blades: 2
Low Pitch: 14.6°+/-0.1°
High Pitch: 35.0°+/-1.0°
Not to be operated above 24 inches of manifold pressure between 1900 and 2200 RPM.
Spinner: Hartzell P/N A-2295P

2. Hartzell Propeller Inc. P/N PHC-J3YF-1MF/F7392-1
TCDS P36EA
Maximum Diameter: 74 inches
Minimum Diameter: 72 inches
Number of Blades: 3
Low Pitch: 14.1°+/-0.1°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2800 RPM
Spinner: Hartzell P/N A-2295-1P

3. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7392-1
TCDS P36EA
Maximum Diameter: 74 inches
Minimum Diameter: 72 inches
Number of Blades: 3
Low Pitch: 14.1°+/-0.1°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2800 RPM
Spinner: Hartzell P/N A-2295-1P

Airspeed Limits

S/N 1005 thru 1147:

V_{ne}	Never Exceed Speed	200 KIAS
V_{no}	Maximum Structural Cruising Speed	165 KIAS
V_o	(2900 lbs) Operating Maneuvering Speed	135 KIAS
Vo	(2600 lbs) Operating Maneuvering Speed	126 KIAS
Vo	(2200 lbs) Operating Maneuvering Speed	116 KIAS
V_{fe}	Maximum Flap Extension Speed	100 KIAS
V_{pd}	Maximum Parachute Deployment Speed	135 KIAS

S/N 1148 and subsequent, and S/N 1005 thru 1147 if Cirrus Service Bulletin SB 20-01-00 is complied with:

V_{ne}	Never Exceed Speed	200 KIAS
V_{no}	Maximum Structural Cruising Speed	165 KIAS
V_o	(3000 lbs) Operating Maneuvering Speed	131 KIAS
Vo	(2600 lbs) Operating Maneuvering Speed	122 KIAS
Vo	(2300 lbs) Operating Maneuvering Speed	114 KIAS
V_{fe}	Maximum Flap Extension Speed	100 KIAS
V_{pd}	Maximum Parachute Deployment Speed	135 KIAS

C.G. Range

S/N 1005 thru 1147:
Forward Limits: 138.7 inches at 2110 lbs with a straight line taper to 141.0 inches at 2694 lbs, and 143.0 inches at 2900 lbs.

Aft Limits: 144.6 inches at 2110 lbs, with straight line taper to 147.4 inches at 2570 lbs, and to 147.9 inches at 2745 lbs, and 148.2 inches at 2900 lbs.

S/N 1148 and subsequent, and S/N 1005 thru 1147 if Cirrus Service Bulletin SB 20-01-00 is complied with:
Forward Limits: 138.7 inches at 2110 lbs with a straight line taper to 141.0 inches at 2694 lbs, and 144.1 inches at 3000 lbs.

Aft Limits: 144.6 inches at 2110 lbs, with straight line taper to 147.4 inches at 2570 lbs, and to 148.1 inches at 2900 lbs, and 148.0 inches at 3000 lbs.

Empty Weight C.G. Range None

Maximum Weight

S/N 1005 thru 1147:
Takeoff and Landing: 2900 lbs.

S/N 1148 and subsequent, and S/N 1005 thru 1147 if Cirrus Service Bulletin SB 20-01-00 is complied with:

Takeoff:	3000 lbs.
Landing:	2900 lbs.
Zero Fuel:	2900 lbs.

Minimum Crew One (1) Pilot

Number of Seats 4 (2 at 143.5 inches aft of datum, 2 at 180 inches aft of datum)

Maximum Baggage 130 Lbs. at 208 inches

Fuel Capacity Total: 60.5 gal at 153.75 inches
Usable: 56 gal (See Note 1)

Oil Capacity 8 quarts at 76.2 inches

Maximum Operating Altitude

With a portable oxygen system, the aircraft is limited to 17,500 ft MSL.
Oxygen must be provided as required by the operating rules. Only portable oxygen systems listed in the FAA Approved Airplane Flight Manual, document number 11934-002, or later FAA approved revisions, are allowed.

Control Surface Movements	Wing Flaps:	Up 0°± 0.5°	Down 50% 16°± 0.5° Down 100% 32°± 0.5°
	Aileron:	Up 12.5° ± 1.0°	Down 12.5° ±1.0°
	Elevator:	Up 25.0° ± 1.0°	Down 15° ± 1.0°
	Rudder:	Right 20.0° ± 1.0°	Left 20.0° ± 1.0°

Additional Limitations: Airframe life limit: 12,000 flight hours

Design Data: The airplane shall be manufactured in accordance with the latest FAA approved revision of "Master Drawing List", Document No. 13750, or other FAA approved data. NOTE: Document No. 12609 is the predecessor document to Document No. 13750.

Serial Nos. Eligible 1005 and on

II - Model SR22, Normal Category, Approved November 30, 2000

Engine Teledyne Continental IO-550-N, Type Certificate Data Sheet E3SO

Engine Limits	Maximum Take-off	2700 RPM (310 hp)
	Maximum Continuous Power	2700 RPM (310 hp)

Propeller and Propeller limits

1. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7694
TCDS P36EA Hartzell
Maximum Diameter: 78 inches
Minimum Diameter: 76 inches
Number of Blades: 3
Low Pitch: 14.1°+/-0.1°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM
Spinner: Hartzell P/N A-2295-1P

2. Hartzell Propeller Inc. P/N PHC-J3YF-1RF/F7694B
TCDS P36EA Hartzell
Maximum Diameter: 78 inches
Minimum Diameter: 76 inches
Number of Blades: 3
Low Pitch: 14.1°+/-0.1°
High Pitch: 35.0°+/-1.0°
No operating limitations to 2700 RPM
Spinner: Hartzell P/N A-2295-1P

Airspeed Limits	Vne	Never Exceed Speed	204 KCAS
	Vno	Maximum Structural Cruising Speed	180 KCAS
	Vo	(3400 lbs) Operating Maneuvering	133 KIAS
	Vo	(2900 lbs) Operating Maneuvering	124 KIAS
	Vo	(2400 lbs) Operating Maneuvering	112 KIAS
	Vfe	Maximum Flap Extension Speed	104 KIAS
	Vpd	Maximum Parachute Deployment Speed	133 KIAS

C.G. Range Forward: 138.0 inches at 2200 lbs with a straight line taper to 139.1 inches at 2700 lbs, and to 141.4 inches at 3210 lbs and 143.8 inches at 3400 lbs.

Aft:148.1 inches at 2200 lbs, with straight line to 148.1 inches at 3400 lbs.

Empty C.G. Range None

Maximum Weight 3400 lbs

Minimum Crew	One (1) Pilot
Number of Seats	4 (2 at 143.5 inches aft of datum, 2 at 180 inches aft of datum)
Maximum Baggage	130 Lbs. at 208 inches
Fuel Capacity Total:	84 gallon at 154.9 inches Usable: 81 gallon (See Note 1)
Oil Capacity	8 quarts at 77.1 inches
Maximum Operating Altitude	With a portable oxygen system, the aircraft is limited to 17,500 ft MSL. Oxygen must be provided as required by the operating rules. Only portable oxygen systems listed in the FAA Approved Airplane Flight Manual, document number 13772-001, or later FAA approved revisions, are allowed.

Control Surface Movements

Wing Flaps:	Up 0°±0.5°	Down 50% 16° ± 0.5° Down 100% 32° ±0.5°
Aileron:	Up 12.5° ± 1.0°	Down 12.5° ± 1.0°
Aileron Trim:	Up 6 ± 1.0°	Down 6 ± 1.0°
Elevator:	Up 25.0° ± 1.0°	Down 15° ± 1.0°
Elevator Trim	Up 11.5° ± 0.5°,	Down 17° +1.0°/-2.0°
Rudder:	Right 20.0° ± 1.0°	Left 20.0° ± 1.0°

Additional Limitations:	Airframe life limit: 4,350 flight hours
Design Data:	The airplane shall be manufactured in accordance with the latest FAA approved revision of "Master Drawing List", Document No. 13750, or Other FAA approved data.
Serial Nos. Eligible	SR22-0001 and on.

Data Pertinent to All Models

Reference Datum	100 inches in front of the forward face of firewall bulkhead
Leveling Means	Door sill and leveling points as defined in AFM
Certification Basis	Model SR20: Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 through 23-47, except as follows: FAR 23.573, 23.575, 23.611, 23.657, 23.673 through Amendment 23-48; FAR 23.783, 23.785, 23.867, 23.1303, 23.1307, 23.1309, 23.1311, 23.1321, 23.1323, 23.1329, 23,1361, 23.1383, 23.1401, 23.1431, 23.1435 through Amendment 23-49; FAR 23.3, 23.25, 23.143, 23.145, 23.155, 23.1325, 23.1521, 23.1543, 23.1555, 23.1559, 23.1567, 23.1583, 23.1585, 23.1589 through Amendment 23-50; FAR 23.777, 23.779, 23.901, 23.907, 23.955, 23.959, 23.963, 23.965, 23.973, 23.975, 23.1041, 23.1091, 23.1093, 23.1107, 23.1121, 23.1141, 23.1143, 23.1181, 23.1191, 23.1337 through Amendment 23-51; FAR 23.1305 through Amendment 23-52 Model SR22: Part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23-1 through 23-53, except as follows: 23.301 through Amendment 47 23.855, 23.1326, 23.1359, not applicable

FAR 36 dated December 1, 1969, as amended by current amendment as of the date of type Certification.

Equivalent Safety Items	Equivalent Levels Of Safety finding (ACE-96-5) made per the provisions of 14 CFR Part 23.221; Refer to FAA ELOS letter dated June 10, 1998 for models SR20, SR22.
	Equivalent Levels Of Safety finding (ACE-00-09) made per the provisions of 14 CFR Part 23.1143(g) and 23.1147(b); Refer to FAA ELOS letter dated September 11, 2000 for model SR22.
	Equivalent Levels Of Safety finding (ACE-01-01) made per the provisions of 14 CFR Part 23.1143(g) and 23.1147(b); Refer to FAA ELOS letter dated February 14, 2001 for model SR20.
Special Conditions	Special Condition (23-ACE-88) for ballistic parachute; Refer to FAA letter November 25, 1997 for models SR20, SR22.
Production Basis	Production Certificate 338CE issued June 12, 2000
Equipment	The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the airplane for certification.
	In addition to the above required equipment, the following equipment are also required: The latest FAA approved Revision of the “PILOT’S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL FOR THE CIRRUS SR20”, Document No. 11934-002 and the latest FAA approved Revision of the “PILOT’S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL for the CIRRUS DESIGN SR22”, Document No. 13772-001.
Maintenance and Inspection	Maintenaance and Inspection of these aircraft must be carried out according to the most recent publications of Cirrus Design Corporation Maintenance Manuals Document NO. 12137-001 for model SR20, and 13773-001 for model SR22.

Note 1. A current weight and balance report including list of equipment included in the certificated empty weight, and loading instructions when necessary must be provided for each aircraft at the time of original certification. The certificated empty weight and loading corresponding center of gravity location must include unusable fuel of 27 lb. at (+153.8 inches) for model SR20; and unusable fuel of 18 lb at (+154.9 inches) for model SR22.

Note 2. All placards specified in the latest FAA approved revisions of the "PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL FOR THE CIRRUS SR20", document number 11934-002 and the latest FAA approved revisions of the "PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL FOR THE CIRRUS SR22" document number 13772-001 must be displayed in the airplane in the appropriate locations. Exterior colors are to be limited to those specified in the latest FAA approved revisions of the "PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL FOR THE CIRRUS SR20" Document 11934-002 and latest FAA approved revisions of the "PILOT'S OPERATING HANDBOOK AND FAA APPROVED AIRPLANE FLIGHT MANUAL FOR THE CIRRUS SR22" document number 13772-001.

Note 3. FAA approved Airworthiness Limitations for inspection time limits and maintenance checks are included in Section 4 and 5 of the Airplane Maintenance Manual (AMM) Document No. 12137-001 for model SR20, and 13773-001 for model SR22.

Note 4. Exterior colors are limited to those specified in the latest FAA approved revision of the Airplane Maintenance Manual (AMM) Document No. 12137-001 for model SR20, and 13773-001; for model SR22.

Note 5. Major structural repairs must be accomplished in accordance with FAA approved Cirrus Design repair methods or other methods approved by the FAA.

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